

ABSTRACT

A high-resolution and high-speed film thickness and thickness  
uniformity measurement method is disclosed in this invention. The  
disclosed method includes a step a) of measuring a film thickness at a  
single point on the top surface of the substrate using an interferometry  
with a measuring light beam having a range of wavelengths. The method  
further includes a step b) of selecting an optimal wavelength from the  
range of wavelengths applied for measuring the film thickness at the  
single point. The method further includes a step c) of measuring  
reflection intensities by scanning over a plurality of points with a  
measuring light beam of the optimal wavelength over the top surface of  
the substrate. The method further includes a step d) of calculating a film  
thickness at the plurality of points applying the optimal-wavelength  
reflection intensities at the plurality of points over the top surface of the  
substrate.